

Appl. No. 09/739,929
Preliminary Amendment dated January 23, 2004
Reply to Office Action of December 23, 2004

IN THE CLAIMS

Please enter the following amendments to the claims.

1. (previously presented) A method of forming a Cu alloy, comprising:
plating a layer of Cu over a substrate;
forming a dopant layer comprising Al or Co over the Cu layer;
driving dopants from the dopant layer into the Cu layer; and
removing the dopant layer.
2. (original) The method of Claim 1, wherein the substrate comprises a diffusion barrier layer overlying a dielectric layer.
3. (original) The method of Claim 2, wherein the diffusion barrier layer comprises a material selected from the group consisting of Ta, TaN, TaSiN, W, WN, WSiN, Ti, TiN, TiSiN, and Co.
4. (original) The method of Claim 2, wherein forming the dopant layer comprises plating a layer of metal.
5. (cancelled)
6. (cancelled)
7. (currently amended) The method of Claim [[5,]] 1, wherein plating the layer of Cu comprises electroplating.

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8. (currently amended) The method of Claim ~~[[5,]]~~ 1, wherein plating the layer of Cu comprises an electroless deposition.

9. (currently amended) The method of Claim ~~[[6,]]~~ 1, wherein driving dopants into the Cu layer comprises elevating the temperature of the dopant layer and Cu layers to between 300°C and 400°C.

10 – 30 (cancelled)

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If there are any additional charges, please charge Deposit Account No. 02-2666.

Respectfully submitted,

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